

# **Biological Agents Decontamination Clean-Up Policy**

**LA SANITATION WATERSHED  
PROTECTION DIVISION  
ENVIRONMENTAL ENFORCEMENT &  
EMERGENCY RESPONSE UNIT**

# **PURPOSE**

The purpose of this protocol is to document the protocols and procedures for the field staff of the Los Angeles Sanitation and Environment (LASAN), Watershed Protection Division (WPD) Environmental Enforcement & Emergency Response Unit. The protocol will outline how LASAN will perform decontaminations in order to reduce the potential adverse human health impacts associated with the biological agents in the public right-of-way and/or City facilities.

# INTRODUCTION

This policy is to be used for remediation projects where decontamination of a specific area is required. Sampling and testing of this material is not necessary due to the difficulty, time and expenses involved, and due to the potential public health issue (1). Proper use of personal protective equipment (PPE) and cleaning techniques is important for effective infection control. Staff should be aware that in work areas where biological pathogens are located there is a potential for deposits to occur on surfaces that in turn can transmit infection.

# INTRODUCTION

The surface(s) may contain a variety of pathogens, including bacteria, viruses, and protozoa. Pathogens potentially present in human feces include *Bacterioides spp.*, *Salmonella*, *Shigella*, *Yersinia*, *Campylobacter*, *Aeromonas*, *Candida*, *E. coli* 0157:H7, *Klebsiella*, *Cryptosporidium*, *Entamoeba histolytica*, viruses including Norovirus and Hepatitis A, and intestinal parasites. Additionally, visible blood in feces may indicate the present of Bloodborne pathogens including HIV, Hepatitis B, and Hepatitis C (3).

# PROCEDURE

This cleanup procedure is for large areas. The surfaces may contain bacteria and other pathogens that can cause illness. Staff can prevent infection by donning the appropriate PPE thereby avoiding direct contact with surfaces while cleaning affected areas. Always follow the Center for Disease Control (CDC) recommended concentrations of sodium hypochlorite for disinfection. If other approved products are more appropriated please follow the EPA approved labels for use.

# PROCEDURE: Rules

- Only healthy (not immune-compromised) individuals may perform clean ups.
- Do not create and inhale dust from contaminated areas.
- No dry sweeping or dry clean up (before applying disinfectant).
- No eating, drinking or smoking during clean up.
- Consult supervisor before cleaning up inside occupied buildings, in enclosed spaces, or near building ventilation systems.
- Follow CDC recommendations for disinfection: For sodium hypochlorite solution of 5.25% a dilution of 1:10 with water is currently the LASAN standard disinfectant (4). Note: there are other EPA approved disinfectants that's staff may use depending on the area to be decontaminated.

# **PROCEDURE - Required Personal Protective Equipment (PPE)**

- Long pants
- Waterproof gloves (nitrile/latex gloves)
- Tyvek coverall (level C or higher)
- Eye protection (goggles)
- Filter mask: N95 or higher particulate respirator
- Closed-toe (water proof shoes preferred).
- Note: the appropriate PPE for WPP this plan is Level C ensemble or higher.

# PROCEDURE – Disinfection




CDC Disinfectant Recommendation 1:10 dilution ratio of water to bleach solution (5.25-6.00% sodium hypochlorite) Note: informational for internal LASAN/WPD use in small blood spills				
CONVERSION TABLE				
sodium hypochlorite concentrations	Bleach Sol. gal./container	PPM	water gal.	New concentration (PPM)
5.25% solution	0.10	52,500	0.90	5,833
5.25% solution	1	52,500	10	5,250
5.25% solution	10	52,500	200	2,625
6.0% solution	0.25	60,000	0.75	20,000
6.0% solution	1	60,000	10	6,000
6.0% solution	0.33	60,000	0.66	30,000
6.0% solution	5	60,000	200	1,500
6.0% solution	10	60,000	200	3,000
6.0% solution	15	60,000	200	4,500
MINIMUM OF 5,250 PPM!				
Unit	conversion	conversion		
one (1) gallon	3.785 liters	16 cups		
1%	10,000 PPM			
Because household bleach contains 5.25%–6.15% sodium hypochlorite, or 52,500–61,500 ppm available chlorine, a 1:1,000 dilution provides about 53–62 ppm available chlorine,				
and a 1:10 dilution of household bleach provides about 5250–6150 ppm.				
<a href="https://www.cdc.gov/infectioncontrol/guidelines/disinfection/disinfection-methods/chemical.html">https://www.cdc.gov/infectioncontrol/guidelines/disinfection/disinfection-methods/chemical.html</a>				



# PROCEDURE – Disinfection

## How to Clean and Disinfect

### Surfaces

- If surfaces are dirty, they should be cleaned using a detergent or soap and water prior to disinfection.
- For disinfection, diluted household bleach solutions, alcohol solutions with at least 70% alcohol, and most common EPA-registered household disinfectants should be effective.
  - Diluted household bleach solutions can be used if appropriate for the surface. Follow manufacturer's instructions for application and proper ventilation. Check to ensure the product is not past its expiration date. Never mix household bleach with ammonia or any other cleanser. Unexpired household bleach will be effective against coronaviruses when properly diluted.
- Prepare a bleach solution by mixing:
  - 5 tablespoons (1/3<sup>rd</sup> cup) bleach per gallon of water or
  - 4 teaspoons bleach per quart of water
  - [Products with EPA-approved emerging viral pathogens claims](#)  are expected to be effective against COVID-19 based on data for harder to kill viruses. Follow the manufacturer's instructions for all cleaning and disinfection products (e.g., concentration, application method and contact time, etc.).
  - For soft (porous) surfaces such as carpeted floor, rugs, and drapes, remove visible contamination if present and clean with appropriate cleaners indicated for use on these surfaces. After cleaning:
  - If the items can be laundered, launder items in accordance with the manufacturer's instructions using the warmest appropriate water setting for the items and then dry items completely.
  - Otherwise, use products with the EPA-approved emerging viral pathogens claims (examples at [this link](#)  ) that are suitable for porous surfaces

### Linens, Clothing, and Other Items That Go in the Laundry

- Do not shake dirty laundry; this minimize the possibility of dispersing virus through the air.
- Wash items as appropriate in accordance with the manufacturer's instructions. If possible, launder items using the warmest appropriate water setting for the items and dry items completely. Dirty laundry that has been in contact with an ill person can be washed with other people's items.
- Clean and disinfect hampers or other carts for transporting laundry according to guidance above for hard or soft surfaces.